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2. The collection, classification, study and publication of reports dealing with the above phenomena. Readers are asked to report incidents and cases. Names must be given, but on request will be treated as confidential.

3. The maintenance of a library on psychical research and related subjects. Contributions of books and periodical files will be welcomed.

4. Cooperating in the above tasks with qualified individuals and groups who will report their work to the Society.

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Notice of Annual Meeting of the Voting Members of the American Society for Psychical Research, Inc.

The Annual Meeting of the Voting Members of the American Society for Psychical Research, Inc., will be held at the office of the Society, 880 Fifth Avenue, Suite 1A, Borough of Manhattan, City of New York, on Tuesday, January 27, 1953, at 4:00 o'clock in the afternoon, for the election of five Trustees and for the transaction of such other business as may properly come before the meeting.

Lydia W. Allison, *Secretary*

Voting Members of the Society

California: Professor B. A. G. Fuller; *Canada*: Mrs. Peggy Jacobsen; *Colorado*: Dr. Jule Eisenbud; *Connecticut*: Mr. Edward Latham; *Delaware*: Mr. Herbert L. Cobin; *Illinois*: Mrs. Emmons Blaine, Mrs. Richard L. Kennedy, Jr.; *Kansas*: Professor Gardner Murphy; *Massachusetts*: Mr. H. Addington Bruce, Mrs. David H. Hale, Miss Constance Worcester; *Michigan*: Mr. Edmond P. Gibson; *New Jersey*: Miss Hettie Rhoda Meade, Miss Gertrude Ogden Tubby; *New York City*: Mrs. E. W. Allison, Mrs. Valentine Bennett, Dr.

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Lectures

Mrs. Eileen J. Garrett, Director of the new Parapsychology Foundation, addressed the members of the Society at the Willkie Memorial Building on Wednesday evening, November 5, 1952. Her lecture was devoted to a résumé of her mediumship in England and in America and to an account of her recent experimental work, a report of which will be published by the foundation.

Forthcoming Lectures

Thursday Evening, January 22, 1953, at 8:15.

The National Republican Club for Women, 3 West 51st Street.

Professor Gardner Murphy on "The Importance of Spontaneous Cases."

Monday Evening, February 16, 1953, at 8:15.

Willkie Memorial Building, 20 West 40th Street.

Rev. Alson J. Smith on "Psychical Research and Religion."

Monday Evening, March 16, 1953, at 8:15.

Willkie Memorial Building, 20 West 40th Street.

Mr. Edward Latham on "Experiences in Extrasensory Perception."

Wednesday Evening, April 8, 1953, at 8:15.

The National Republican Club for Women, 3 West 51st Street.

Professor C. J. Ducasse on "Some Questions Concerning Psychical Phenomena."

The Psychic Fifth Dimension

HORNELL HART

A. The Need for a New Conceptual Framework

Dr. J. R. Smythies, in the *Journal* of the Society for Psychical Research (London) for September-October, 1951, suggested that "the fundamental assumptions, on which natural science is based, should be . . . revised." The aim of his paper was "to suggest a series of alternative assumptions" which, he said, "account satisfactorily for the facts of parapsychology."[1] His basic contention was that both normal consciousness and parapsychological phenomena might be explored more adequately in terms of seven-dimensional space, in which four dimensions were those of physical space-time, while three additional dimensions of space were provided for the psychical realm, the time dimension being shared in common by the two systems.

The need for a revision of fundamental assumptions has been recognized by various leaders of thought in psychical science. J. B. Rhine asserted recently:

> ". . . parapsychology has gone wrong in the past mainly in stating its problems in terms of untested assumptions that were part of the current thought of the period. . . . a more effective order of investigation would have inquired first into the assumptions, rather than take them for granted. . . . The speculative associations and cultural trappings that have been carried along with our branch of inquiry all too long are being cast off. . . . the inquirer of the future will henceforth steer clear of entangling theologies and speculative hypotheses. . . ."[2]

Similarly, R. H. Thouless said recently: "The obstacle to new theoretical insights in the past has been rigidity in holding to old conceptions."[3] Again, he said: "One of the most obvious needs of parapsychology is the formulation of hypothetical systems which will lead to expectations that can be tested by experiment."[4] H. H. Price writes: "A comprehensive conceptual framework into which all the different sorts of psi-phenomena can be fitted . . . is something which is very greatly needed."[5]

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[1] J. R. Smythies, "The Extension of Mind: A New Theoretical Basis for Psi Phenomena," *Journal* S.P.R., Vol. XXXVI, 1951-1952, pp. 447-502.

[2] J. B. Rhine, "Telepathy and Human Personality," *Tenth Myers Memorial Lecture*, S.P.R., 1950 and *Journal of Parapsychology*, Vol. 15, 1951, pp. 30-31.

[3] R. H. Thouless, "Thought Transference and Related Phenomena," *Journal of Parapsychology*, Vol. 16, 1952, p. 38.

[4] R. H. Thouless, "Comments on Dr. Smythies' Paper," *Journal* S.P.R., Vol. XXXVI, 1952, p. 542.

[5] H. H. Price, letter to Hornell Hart, May 7, 1952.

The conceptual framework offered by Dr. Smythies' article seems to the present writer to be unsatisfactory. But, taken with the discussion which appeared in the next issue,[6] it did stimulate, in this writer's mind, the formulation of a substitute theory, based on five dimensions instead of seven. Copies of a preliminary draft of that theory were sent out to some outstanding leaders of thought in this field, with a view to seeking to discover what are the major areas of agreement, and what are the most vital issues, in relation to the formulation of a comprehensive conceptual framework such as is admittedly needed in psychical research. Very valuable replies were received from Professor C. J. Ducasse, F. L. Kunz, Professor Laurence J. Lafleur, Professor Gardner Murphy, Charles E. Ozanne, Mrs. Dorothy H. Pope, Dr. J. G. Pratt, Professor H. H. Price, Dr. J. B. Rhine, Dr. J. R. Smythies, G. N. M. Tyrrell, and others. Their suggestions have been incorporated in two ways. First, the five-dimensional theory has been extensively revised in the light of their criticisms. Second, a series of outstanding issues brought out in their correspondence has been summarized in a supplementary article.

B. Deriving the Fifth Dimension by Induction[7]

The conceptual framework proposed in the present article is based on the proposition that both parapsychological phenomena and normal consciousness might be analyzed more adequately, simply, logically, and successfully by merely adding a single fifth dimension to our ordinary four of space-time. The logic of adding the fifth dimension may be developed as follows.

The Successive Relations of the First Three Dimensions: Suppose that I hold up my two index fingers about a foot apart. Between the tips of my fingers is a one-dimensional object—a straight line. You cannot see this object because it has no breadth or thickness—only length. Within that straight line, we know that an infinite number of mathematical points could be located without touching each other. Each of these points would be a zero-dimensional object.

Now suppose I hold up my two hands about a foot apart. Between my hands is a two-dimensional object—a mathematical plane. You cannot see it because it has no thickness, but only length and breadth. We know that within this two-dimensional object an infinite number of straight lines could be located parallel to each other—that is, without ever intersecting one another.

Now take a solid object like a wooden cube. You can see the cube

[6] H. H. Price et al., "The Extension of Mind: Comments on Dr. J. R. Smythies' Paper," *Journal* S.P.R., Vol. XXXVI, 1951-1952, pp. 537-570.

[7] This section has been rewritten in the light of suggestions received from Mrs. Dorothy Pope, Dr. J. B. Rhine, and others.

and touch it, because it has three dimensions of length, breadth and thickness, and because it also has a solid, opaque content. We know that within this cube it would be possible to locate an infinite number of mathematical planes parallel to each other, without their ever intersecting one another.

If the straight line is extended infinitely in both directions, it becomes not merely a one-dimensional object but a one-dimensional continuum.

Similarly, if we extend the mathematical plane infinitely in its four directions it becomes a two-dimensional continuum, and if we extend the three-dimensional space of the block of wood infinitely in each direction, that becomes a three-dimensional continuum. We can generalize the steps taken above by saying that into either a one-, a two-, or a three-dimensional continuum, an infinite number of continua of the next lower dimension can be fitted parallel to each other—without intersecting.

Is Time a Fourth Dimension? Common sense tells us that when the three dimensions of length, breadth and thickness have been set up at right angles to each other, the possibilities have been exhausted. It would seem, at first sight, that no fourth dimension could be set up at right angles to all the three dimensions of space. That appears to be the position at which Dr. J. B. Rhine takes his stand. He says:

> "I have never felt right about using dimensions in the figurative way that it seems to me the word is used once it is taken out of the realm of spatial experience. I may, of course, be missing something—even a great deal. . . ."[8]

That time cannot logically be considered to be one of four equivalent dimensions is argued persuasively by Professor Laurence Lafleur.[9]

To test the question of whether a literal fourth dimension is needed, suppose we examine an ordinary time chart—for example, a graph showing the height of the tide at a given point in latitude and longitude at a succession of hours and minutes. The two dimensions on the chart are at right angles to each other. The shape of the curve on the chart is highly significant. It is capable of mathematical exploration and (by the aid of astronomy) of prediction.

Four-dimensional space-time is perhaps the most widely used and fundamental extension of our former three-dimensional conception of reality. The essentially spatial character of this concept can be illustrated by supposing that a girl, dressed in white, is dancing in front of a black screen, and that moving pictures are taken of her dance.

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[8] J. B. Rhine, letter to Hornell Hart, April 22, 1952, commenting on a preliminary draft of this article.

[9] Laurence J. Lafleur, "Time as a Fourth Dimension," *Journal of Philosophy*, Vol. XXXVII, 1940, pp. 169-178.

After the film has been developed and printed, the figure of the girl is cut out from each frame, and these cut-outs are cemented, back to front, in chronological order. The result is a physical object, representing the girl's four-dimensional dance in the three dimensions of height, breadth and time, but excluding the third dimension of depth. Any moving-picture film is actually, of course, a representation of a four-dimensional, space-time object. With the aid of stereoscopic methods, awareness of the fourth spatial dimension can be made more vivid.

Each successive frame of the moving picture of the dancer may be regarded as a different slice of space-time. Each one of these pictured slices represents a three-dimensional object. The three dimensions of space for any one of these objects might be extended infinitely in every direction. The pictures might be taken every millionth of a second, and (if enough film were provided) the series might go on and on without any assignable limit. Therefore, it is correct to say that an infinite number of three-dimensional continua might be fitted into four-dimensional space-time without intersecting each other. But this is a further example of what we have already noted about fitting an infinite number of continua into the continuum of the next higher number of dimensions. We now have four steps, in each of which it appears that an infinite number of n-dimensional continua can be fitted into an $(n + 1)$-dimensional continuum without intersecting.

The Fifth Dimension: But can an infinite number of four dimensional continua actually be fitted into a five-dimensional continuum? Let us see:

Let us imagine a barrack dormitory, in which a large number of soldiers are sleeping. One soldier is dreaming that he is engaged in an air battle; another is dreaming that he is crossing the ocean; another that he is talking to a girl dancer at the Moulin Rouge; another that he is climbing a mountain; another that he is harvesting wheat in a vast field; another that he is robbing a bank—and so on indefinitely. Each such dream is a four-dimensional object,[10] having three dimensions of space and one of time. In the dream of the air battle, for example, the dreamer seems to see his companion planes on his right and left, with an enemy plane swooping down from "one o'clock" (i.e., from above, at a point a little to the right of center). He sees his comrade on the left go down in flames. A moment later (in his dream) he shoots down an enemy plane, but then finds that his own left hand is shot off. Similarly, in each of the other dreams, the four dimensions familiar in ordinary sensorimotor experiences

[10] The word "object" as used in this article includes very complex structures. For example, the entire earthly life of a given person is regarded as a single four-dimensional object; so is the entire solar system.

appear with equal vividness—and in some dreams with greater vividness—as in waking life.

Every unshared and non-veridical dream might (theoretically) be extended infinitely in each of its four dimensions without interfering with any of the others. Therefore, each such dream can be regarded as part of a four-dimensional continuum parallel with each of the others, and the number of such non-intersecting dreams might theoretically be increased beyond any assignable limit.

To generalize the series of which the above illustrations are the beginning, let us define an $(n + 1)$-dimensional continuum as one into which an infinite number of n-dimensional continua can be fitted parallel to each other—i.e., without intersecting each other. If this generalized definition be accepted, the possible existence of an infinite number of four-dimensional, non-intersecting dreams would constitute (by definition) a five-dimensional continuum. Let us call the fifth dimension of this continuum the "psychic dimension."

Types of Four-Dimensional Space-Time Structures: What other kinds of four-dimensional structures besides dreams belong in the five-dimensional continuum? A little analysis of one's own experience will show that five types of space-time structures occur:

1. The ordinary "outer world" is perceived from moment to moment in our sensory experience and in our motor operations. This continually shifting sensorimotor world carries behind it the memory of immediately preceding sensorimotor experiences and projects into the immediate future the anticipated and planned structures of the experiences into which we are moving.

2. Remembered space-time experiences, not directly connected with the current sensorimotor world, form a second type.

3. Specific plans and anticipations, not directly connected with the current sensorimotor world, form a third type.

(Theoretically, all structures of types 1, 2 and 3 can be consolidated into one four-dimensional object, the outer world of common sense, which I take to be essentially identical with Dr. Smythies' "perceptual world.")

4. Fictional and fantastic imagined space-time experiences are a fourth type.

5. Dreams form the fifth type, in which may be included hallucinations.

On the basis of the above analysis it can be seen that in the five-dimensional psychic continuum there is room for all dreams, all memories, all imaginative fictions, all visualized plans, all heavens, hells and purgatories, the astral world of the Theosophists, and the "branching time-lines" of the science-fictioneers.

The existence of the five-dimensional, psychic continuum, which seems to be demonstrated by the above reasoning, offers a major challenge to research. On the basis of present knowledge, what verifiable facts and principles can be established about this psychic continuum? What further experimentation and other data-collecting are called for by such facts and principles, if and when they are established?

C. Psychic Intersections

Thus far we have been concerned with dimensional objects and continua which are parallel — that is, which do not intersect. But the intersections of four-dimensional objects within the five-dimensional continuum provide at least a beginning basis for understanding psychic phenomena.

To make clear the meaning of an intersection between two four-dimensional structures, let the reader think of his own life, up to the present time, as such a structure. Then let him think of the life of his marriage partner, or of his closest friend, as another four-dimensional structure. For such persons, the structures of their two lives intersect whenever the two persons are in contact — whenever either of them enters into the area of the other's life.

Such intersections provide much of the basis for personal narratives. In strictly historical biographies, the four-dimensional structures of individual lives intersect within the four-dimensional continuum of ordinary space-time. So also in strictly fictional narratives, the author creates an imaginary four-dimensional drama within which the lives of the characters intersect. The life of a heroine in a drama is a four-dimensional structure, and so is that of a hero. When those lives intersect in certain ways, drama develops.

But in historical fiction, four dimensions are not enough: the fifth dimension is required. When a "real" historical character becomes the center of a novel or of a fictional drama, intersections are explored between the four-dimensional structure of the hero's "real" life and the "imaginary" four-dimensional structures of the other characters.

Shared Dreams are Merging Intersections: When a shared dream occurs, the two four-dimensional dream experiences are no longer parallel (as in the barrack dormitory referred to above); they intersect. For example:

> 1. In Elmira, N. Y., on the night of January 26, 1892, between two and three o'clock, Dr. Adele Gleason dreamed that she stood in a lonesome place in dark woods, that great fear came over her, that the presence of her friend, J. R. Joslyn, came to

> her and shook a tree by her, and its leaves began to turn to flame. On the same night, at the same hour, Joslyn dreamed in another house in Elmira that he found Dr. Gleason in a lonely wood after dark, apparently paralyzed with fear, that he went to her side and shook a bush, when the falling leaves turned to flame. Both dreamers submitted written accounts within a month of the occurrence. The accounts agree that when Dr. Gleason and Mr. Joslyn met, four days after the dream, she mentioned having had a strange dream, but that he at once stopped her, and related his own dream first, without suggestion from her. Dr. Hodgson made written inquiries and found that Dr. Gleason had recorded the occurrence of the dream in her notebook the morning after it occurred, and before she saw Joslyn.[11]

The above dream was shared by two people, and may be regarded as a simple merging-intersection between two four-dimensional structures. The term *merging-intersection* is used in this theory, instead of the simple geometrical term *intersection,* because of a difficulty pointed out by Professor Laurence J. Lafleur. He calls attention to the fact that when two planes intersect within a given three-dimensional continuum, their intersection is a one-dimensional line. When two lines intersect in a two-dimensional plane, their intersection is a zero-dimensional point. On the basis of the geometrical principle illustrated by these two examples, it would be expected that an intersection between two four-dimensional dreams within a five-dimensional continuum would be a three-dimensional object. But a shared dream has four dimensions, not three.

The solution of this difficulty seems fairly simple. All shared dreams involve the meeting of two or more personalities at the intersection of their respective four-dimensional dream structures. Granted that that intersection, occurring within the five-dimensional continuum, would be theoretically an instantaneous, three-dimensional structure, it is evident that the recognition of the other person, and of the interests which the two shared, would tend to bring about a merging of the two dream structures into one, jointly experienced, four-dimensional dream. In waking life, the "present moment" is, theoretically, an instantaneous slice of the three-dimensional "material" world. Actually, it is now generally recognized that any moment of consciousness has duration. The phrase "specious present" has been used in this connection. Similarly, the intersection between two dreams would be — not the timeless flash called for by pure geometry, but a shared experience, in which one or both of the two dreamers would turn sufficiently from his previous train of dream-experience to merge his dream with that of the reciprocal dreamer. Quite probably a vast

[11] *Journal* S.P.R., Vol. VII, 1895-1896, pp. 104-106; also *Proc.* S.P.R., Vol. XXXIII, 1923, pp. 417-419.

number of momentary three-dimensional psychic intersections occur without being remembered. But such intersections, by reason of emotional and intellectual linkages, would be quite likely to develop into merging intersections. With rare exceptions, only those which developed into the merging type would be memorable.

A Three-Party Psychic Intersection: Among the cases known to the present writer, the best example of a merging-intersection between more than two dreams at the same time is the following, related in a letter dated May 3, 1869, by Henry Armitt Brown, who subsequently became a brilliant lawyer:

> 2. "In the fall of 1865 . . . while I was studying law in the city of New York, I retired to my room about midnight of a cold and blustering evening. I remember distinctly hearing the clock strike twelve as . . . drowsiness crept upon me and I slept. I had hardly lost consciousness when I seemed to hear loud and confused noises and felt a choking sensation at my throat, as if it were grasped by a strong hand. I awoke (as it seemed) and found myself lying on my back on the cobble-stones of a narrow street, writhing in the grip of a low-browed thick-set man with unkempt hair and grizzled beard, who with one hand at my throat and holding my wrists with the other threw his weight upon me and held me down. . . . Over and over we rolled upon the stones. . . . Presently I saw him reach forth his hand and grasp a bright hatchet. . . . I made one more tremendous fight for life, for a second I held my enemy powerless and saw with such a thrill of delight as I cannot forget the horror-stricken faces of friends within a rod of us rushing to my rescue. As the foremost of them sprang upon the back of my antagonist he wrenched his wrist away from me. I saw the hatchet flash above my head and felt instantly a dull blow on the forehead. I fell back on the ground, a numbness spread from my head over my body, a warm liquid flowed down upon my face and into my mouth, and I remember the taste was of blood. . . .
>
> "Then I thought I was suspended in the air a few feet above my body, I could see myself as if in a glass, lying on the back, the hatchet sticking in the head. . . . I heard the weeping of friends, at first loud, then growing fainter . . . with a start, I awoke . . . my watch told me I had not been more than half an hour asleep.
>
> "Early the next morning I joined an intimate friend with whom I spent much of my time . . . suddenly he interrupted me with the remark that he had dreamed strangely of me the night before. . . . 'I fell asleep,' he said, 'about twelve and immediately dreamed that I was passing through a narrow street when I heard noises and cries of murder. Hurrying in the direction of the noise, I saw you lying on your back, fighting a rough laboring man, who held you down. I rushed forward, but as I reached you he struck

you on the head with a hatchet and killed you instantly. Many of our friends were there and we cried bitterly. . . .'

" 'What sort of a man was he?' I asked. 'A thick-set man, in a flannel shirt and rough trowsers; his hair was uncombed and his beard was grizzly and of a few days' growth.'

"Within a week I was in Burlington, New Jersey. I called at a friend's house. 'My husband,' said his wife to me, 'had such a horrid dream about you the other night. He dreamed that a man killed you in a street fight. He ran to help you, but before he reached the spot your enemy had killed you with a great club.'

" 'Oh, no,' cried the husband across the room, 'he killed you with a hatchet.'. . .

"P.S. I may add that these friends of mine were personally unknown to each other. The first one in New York dreamed that he was the foremost who reached the scene, the other that he was one of the number who followed: both of which points coincided exactly with my own dream."[12]

If the three dreams took place substantially as reported above, we have here an account of a triple merging-intersection within the five-dimensional psychic world. The two friends had the same kinds of reasons for believing that Brown's real focus of consciousness was present within the personality of which they dreamed as they had for thinking that it was present in the physical body with which they conversed in waking life.

The Frequency of Shared Dreams: The two cases cited above are taken from a fairly extensive literature of this type. A collection of such cases, published in 1933, summarized 15 reciprocal dreams.[13] At that time the author estimated conservatively that there was about one chance in 840,000 that these cases were all false.

The fact that 15 cases of shared dreams were assembled in that study certainly suggests that such dreams *do* occur. Indeed, since (a) telepathy is now a fairly widely accepted phenomenon, and (b) since practically everyone admits that dreams occur, and (c) since a combination of dreams and telepathy would produce shared dreams, the phenomenon might seem to be an established fact. But if such dreams are real, they provide a hypothetical basis for a comprehensive exploration of psychic reality. Why, then, has there been no systematic series of experiments to determine how frequently shared dreams do occur? Any really serious and systematic research on the problem of survival would need to explore the question of shared dreams rigorously and with some thoroughness. This would (of course) require

[12] Walter Franklin Prince, *Noted Witnesses for Psychic Occurrences*, B.S.P.R., Boston, 1928, pp. 61-63.

[13] Hornell Hart and Ella B. Hart, "Visions and Apparitions Collectively and Reciprocally Perceived," *Proc.* S.P.R., Vol. XLI, 1932-1933, pp. 234-243.

the development of valid statistical methods for determining what degrees of likeness between the dreams of two or more people could reasonably be accepted as not due merely to chance. Such methods have already been outlined, and seem promising.

Apparitions Involve Merging Intersections: A few pages back in this article, five types of four-dimensional space-time structures were listed. The different types of psychic merging-intersections may be related to that list of types of structures. In ordinary historical narratives, the biographies of the characters intersect within the past areas of the outer world which common sense regards as stretching back from our current sensorimotor experience. In ordinary fiction, the intersections are between the imaginary biographies of the characters; all such intersections take place within an imaginary four-dimensional world. In historical fiction the intersections begin to involve two types of four-dimensional structures — namely, the real biographies of the historical characters and the fictional biographies of the other characters.

Conscious Apparitions of Living Persons: Apparitions of the living may be regarded as another variety of two-type intersection. In such experiences, a four-dimensional dream or other imagined experience intersects with the ordinary, outer-world experience of those who perceive the apparition. For example:

> 3. In 1854, the Rev. P. H. Newnham, then a student at Oxford, had a vivid dream that he was stopping in the home of his fiancée's family. As he started for bed, in his dream, he perceived his fiancée near the top of the staircase. He rushed after her, overtook her on the top step, and passed his arms around her waist, under her arms, from behind. On this he woke, and a clock in the house struck ten almost immediately afterwards. He wrote a detailed account of this the next morning to his fiancée. Crossing his letter came one from the lady, telling that about ten o'clock on the night when the dream occurred, on reaching the landing of the stairs, on her way to bed, she heard his footsteps on the stairs and felt him put his arms around her waist.[14]

In the above case, a representation of her fiancé's personality was perceived audibly and tactually by the future Mrs. Newnham. That this personality representation was actually the vehicle of Mr. Newnham's essential spirit is indicated by the fact that he, at the same hour of the same night, dreamed of observing and operating from within that same dream self. The experience was promptly attested in writing by both participants. This case is one of twelve "Apparitions

[14] Edmund Gurney, F. W. H. Myers, and Frank Podmore, *Phantasms of the Living*, Trübner and Co., London, 1886, Vol. I, pp. 225-226.

Corresponding with Dreams or Hallucinations in the Appearers," cited in the study referred to earlier.[15] In some of these other cases also, the apparitional person was dreaming of being in the presence of the person who perceived the apparition; in others he was attempting to project his apparition; in others he was experiencing an "astral projection"; in others he was merely thinking about the person by whom he was seen or the place in which he was seen. But in each such case, the personality embodiment acted as a vehicle to a greater or less extent for the essential spirit of the person represented, and the embodiment was perceived as if it were part of the sensorimotor surroundings of the percipient.

Collectively Perceived Apparitions of the Dead: The above merging-intersection between a man's dream and a woman's waking world involved only two people, both of whom were still physically alive. The following case involves what appears to be a series of merging intersections between the waking experiences of nine different people and an apparition of a deceased member of the family:

> 4. In June 1931, a chimney-sweep named Samuel Bull died of cancer in Ramsbury, Wilts., England, leaving an aged invalid wife and a grandson, James Bull, twenty-one years of age, living in the cottage where he died. In August 1931, a married daughter, Mrs. Edwards, came with her five children and her husband to live with them.
>
> Sometime in or after February 1932, Mrs. Edwards saw the deceased man ascend stairs and pass through a door, which was shut, into the room in which he died, and in which his widow had been lying for some time, but which was then shut up and unused. Almost immediately after Mrs. Edwards saw the apparition, James Bull also saw it.
>
> Later all the members of the family together saw the apparition. Even the smallest girl (aged 5) recognized it as "Grandpa Bull." The appearances continued at frequent intervals from that time until about April 9. Whenever the apparition was seen, all the persons present were able to see it.
>
> The apparition seemed solid, and twice laid his hand on the brow of Mrs. Bull. Once she heard him call her "Jane." On one occasion the figure was visible continuously for a period thought to have been a half-hour. It always appeared to be quite life-like. The features were clearly recognized. Mrs. Edwards spoke of noting the appearance of the hands, with the knuckles seeming to be protruding through the skin. He was dressed as he usually had been in the evenings when he had finished work. A muffler which he was wearing was noted as being different in color from the rest of the clothes.

[15] Hornell Hart and Ella B. Hart, *op. cit.*, p. 228.

> The case was originally reported by the local vicar, the Rev. G. H. Hackett. Through him Lord Selborne and Admiral Hyde Parker heard of the case as early as April 3, 1932. Sometime between April 1 and 11 the vicar, at Admiral Parker's request, visited the family and put to Mrs. Edwards a series of questions covering the reported phenomena, which she answered perfectly consistently with earlier statements made by the family. On April 14, Admiral Parker, Mr. Hackett, Lord Balfour and Mr. Piddington called at the cottage and interviewed Mrs. Edwards and Mrs. Bull, who confirmed the information previously supplied. On May 31, 1932, the vicar visited the family and secured the signatures of Mr. and Mrs. Edwards to the statements of facts which he had previously secured from them.[16]

Are Apparitions of the Dead Similar to Apparitions of the Living? The above section gives brief summaries of two cases of apparitions. In an article published in 1933, summaries are given of 59 cases, for which more or less trustworthy evidence of objectivity is available. From that collection were excluded (of course) mere individual hallucinations, such as might be experienced by persons who were delirious or psychotic. The collection includes 34 cases of apparitions perceived by two or more individuals at the same time,[17] and 24 cases of apparitions which corresponded with dreams or with deliberate experimental efforts on the part of the persons whose apparitions were seen. One additional case belongs to both of these two types, making a total of 59 cases. Since apparitions are so fundamentally related to intersections between four-dimensional structures within the five-dimensional psychic continuum, it may be worth while to summarize briefly some of the conclusions reached in the above-mentioned study.

In the 35 cases of collectively perceived apparitions, the accounts show that, typically, each of the two or more percipients saw the same figure, in the same spatial location, wearing the same clothes, with the same facial expression and doing the same things. If the observers were at different locations they saw the figure as it would be seen from such locations — and even saw suitable reflections in a mirror when the figure was suitably located. If these experiences were subjective, they were collectively subjective, and they were consistent in their relations to the material environment. In the 24 cases of apparitions corresponding with dreams or with deliberate projections, the percipient and the person whose apparition was seen both remembered the joint experience (to a greater or less extent), consistently, as two people would who had met in ordinary life.

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16 *Journal* S.P.R., Vol. XXVII, 1932, pp. 297-303.

17 G. N. M. Tyrrell said in 1942: "The number of cases [of collective percipience of apparitions] in our collection is certainly not less than 130 . . ." ("Apparitions," *Seventh Myers Memorial Lecture,* S.P.R., 1942, p. 79).

On the basis of the evidence summarized above, it seems safe to conclude (1) that apparitions of persons whose sensorimotor bodies are not present have been perceived in scores of different cases, widely scattered over the earth and at widely separate dates; (2) that these experiences (in at least scores of cases) have been objectively real in the sense of being consistently shared by two or more people; and (3) that these psychic intersections are a fundamental type of phenomenon which must be dealt with in any adequate theory of the nature of existence.

The two cases summarized earlier in this section are of markedly contrasted types. The apparition of Mr. Newnham is an example of a personality-representation which became the vehicle for the focus of consciousness of the person whose apparition was perceived. Fifteen of the cases summarized in the larger collection seem to have involved apparitions which became vehicles through which the essential consciousness of the appearer was observing and operating. The apparition of Samuel Bull, on the other hand, was a personality-representation of an individual whose physical body was dead. In the larger collection of cases, sixteen examples of this sort are given. The likenesses and differences between these two classes of apparitions constitute one of the crucial empirical facts of psychical research. If apparitions of the dead are found to be essentially the same sort of phenomenon as apparitions which constitute vehicles for the consciousness of absent living persons, then the hypothesis of survival of personality beyond bodily death is vastly strengthened. What are the actual facts as to the likenesses and differences between the two groups of apparitions cited above? The comparison may be discussed under six headings:[18]

1. Both the collectively perceived apparitions of the dead and the self-conscious apparitions of the living were recognizably similar to — and in various cases indistinguishable at first sight from — the sensorimotor bodies of the persons represented. This similarity, in both types of apparitions, applied to the face and other features, the stature, and the clothing.

2. The apparitions of the living persons were perceived at a distance from the living sensorimotor bodies of the persons whom they represented. The apparitions of the dead were also at a distance from the bodies of the persons represented — and in that group of cases, of course, the physical bodies were no longer alive.

3. The self-conscious apparitions of the living were perceived by sight in almost all cases, but were also experienced by touch and by sound in some instances. Apparitions of the dead also were visually

[18] Hornell Hart and Ella B. Hart, *op. cit.*, pp. 247-249.

perceived in almost all cases, but also are reported to have spoken to the percipients and to have touched them in some cases.

4. Both the conscious apparitions of living persons and the apparitions of persons known to be dead were seen in the great majority of the cases by persons with whom they had close emotional ties. Wives, husbands, fiancés, close friends and relatives made up most of the list of apparitions in both types of cases.

5. Both the conscious apparitions of the living and the apparitions of the dead, in various cases, have appeared at a time of crisis in the life of the person toward whom the apparition appeared to be directed. In both groups of apparitions, cases are found in which the apparition seemed to be purposefully concerned to be of help in that crisis.

6. Both the conscious apparitions of the living and the collectively perceived apparitions of persons known to be dead made apparently intelligent and purposeful adjustments to physical objects and to people. Smiling and nodding at the percipients, touching them, conversing with them, bending over a sick child with a look of intense love, entering through a door, walking across a floor, walking up or down stairs, looking at a portrait, and sitting on a chair or a bed, are examples of such adjustments.

7. Both types of apparitions also, at times, appeared to transcend the ordinary limitations of the sensorimotor world. They at times passed through locked doors or through other material objects. They sometimes floated in the air without physical support. Such departures from the usual modes of sensorimotor behavior, however (if one may judge tentatively from the small samples available) were much more frequent among the apparitions of the dead. Such apparitions sometimes took shape or faded out gradually, were transparent, and were sometimes self-luminous. Self-conscious apparitions of the living, in the cases cited here, did none of these latter things.

Aside, then, from these tendencies to be luminous and transparent, the 15 apparitions which served as vehicles for the observing and operating consciousness of living persons were markedly similar to the 16 collectively observed apparitions of the dead. Merging intersections between the dreaming consciousness of a living person and the waking consciousness of another living person evidently involve apparitions. But if amazingly similar apparitions are experienced (as in the above cases) when the physical body of the person represented is dead, what then is intersecting with the waking experience of the living percipient? Could it be the surviving consciousness of the appearer?

D. How are the Five Dimensions Related to the "Material World"?

A crucial element in the theory proposed by Dr. Smythies is his distinguishing between "physical" and "psychical" space-time continua. The present writer believes that that type of analysis complicates the problem needlessly, without providing a basis for effective psychical research. We need not concern ourselves with anything "out there" which "causes" the observations which we experience as part of the configuration which we call a "material object." Dualism, of the sort on which Dr. Smythies' theory is based, can be obviated by an approach which starts with the stream of conscious experience, and subdivides it by means of a clear-cut experiment.

This experiment consists in approximating as closely as feasible to the following operations: going into an absolutely light-proof, soundproof room which is noiselessly and draftlessly air-conditioned, sitting down in a perfectly comfortable chaise-longue, switching off the lights, relaxing completely, but with alert consciousness, and ceasing to pay any attention to breathing, heart-beat and other physiological processes. Under those conditions, certain aspects of one's consciousness disappear for the time being. We may call these "the sensorimotor world." All other parts of one's experience may be called "the inner world."[19]

The sensorimotor world may at first appear to be identical with the material space-time world of common sense. But when we examine our experience-configurations more carefully we find that this is not true. For one thing, the sensorimotor world, which is shut out by going into the dark, quiet, comfortable room, is a matter of the continuous present. The past is contacted only through memory and through the interpretation of records; memory and interpretation belong to the inner world. Time, therefore, is an inner-world phenomenon, which we project into the sensorimotor world by interpretation.

The kinds of experience which belong in the inner world include the following: (1) All dreams belong there, since one could dream under the conditions of the dark, quiet, comfortable room. (2) Also to the inner world belong concrete memories of past sensorimotor experiences and of dreams. (3) Concretely visualized plans and anticipations of the future also belong to the inner world. But in addition to these three types of specific imagery, two more kinds of inner-world experience must be recognized. (4) Generalizations expressed

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[19] Professor Ducasse properly criticizes the above over-simplified statement of the experiment. In a forthcoming article a more adequate discussion will be offered which (it is believed) meets Professor Ducasse's objections.

in words, diagrams or other types of symbols belong here. (5) Beyond these we must recognize the existence of wordless and imageless thought, which we may call "intuition." Types (4) and (5) go beyond our five-dimensional continuum, and may provide the basis for the sixth and perhaps subsequent dimensions.

In the light of the above analysis, how can we think of "material objects" without the dualistic assumption of the existence of unknowable "things out there"? The answer consists in being concerned only with the configuration of experience. Any material object may be defined operationally as consisting in that configuration of observations and operations, actual, remembered and potential, which are correlated with the name or with the other key observation or operation by which it is identified. The "actual" operations and observations of a given "material object" belong to the sensorimotor world; the remembered and potential ones belong to the inner world.[20]

In What Sense Do We Share a Common Sensorimotor World? Under the five-dimensional system proposed above, what would one mean by saying that "we share a common physical world"? The physical bodies of one's human associates are material objects, as defined above. These bodies appear to be very similar to one's own body. They act in ways analogous to the ways in which oneself acts. In one's own body, the "I" observes and operates upon its sensorimotor world from a focus located in space and time. These other living human bodies act as if they provided foci from which other consciousnesses like one's own observe and operate upon this same sensorimotor world. One finds that one can cooperate with these others in the present, that one can recall common memories of past sensorimotor experiences, and that one can plan future cooperation with them by means of verbal symbols, which they usually interpret in ways coordinate with one's own interpretations. One has no absolute and final proof of the independent existence of these other consciousnesses, but the hypothesis that they exist proves exceedingly useful, and is confirmed by so many detailed observations and operations that sane persons practically universally appear to adopt it.

But what about the "material world" of the physicists? The present approach assumes that associated human beings share the same contemporary sensorimotor world — defining "sharing" in terms of coordinated and correlated operations and reported observations. It also assumes that competent human beings can verify and coordinate each other's remembered and potential experiences correlated with those specific sensorimotor experiences. The physical sciences consist merely in systematic explorations of the remembered, actual and potential

[20] Cf. Whately Carington, *Thought Transference,* Creative Age Press, New York, 1946, pp. 141-144.

operations and observations which are correlated with given types of experience-patterns. They provide descriptive and predictive formulas for more effective dealings with our shared sensorimotor world, and with its associated memories and potentialities. The "material world" is merely a complex hypothesis which is used by the public in a commonsense form, and by physical scientists in a rigorous form, to summarize our experience of "material objects" as defined above.

Five-Dimensional Space Contains an Unlimited Number of Four-Dimensional Systems: The implications of five-dimensional space can easily be misunderstood. Commenting on a preliminary draft of this article, Dr. J. R. Smythies wrote:

> "Your two space systems comprise on the one hand psychical space which you fill with dreams, memories, etc., and physical space which you equate with the space filled by the perceived body and the visual field (your sensorimotor world)."[21]

But this is a misinterpretation. The five-dimensional theory regards the sensorimotor world as simply the present-time slice of a very special case among the unlimited number of four-dimensional systems contained within the psychic continuum. Every work of fiction creates a different four-dimensional system — parallel in many ways to our historical space-time world, but having its own imaginary dimensions of time and space. In Galsworthy's *Forsyte Saga*, a series of successive novels were fitted into one such fictional four-dimensional system.

Similarly, a shared dream (to the extent that it was actually shared) would constitute a four-dimensional structure which might conceivably be extended into a four-dimensional continuum. If surviving personalities found themselves in an "astral world" that too would constitute a four-dimensional continuum.

Every Four-Dimensional System Has its Own Time-Scale: Another failure of the original draft of this article to make clear the full implications of the five-dimensional theory is indicated by the following comment by Professor H. H. Price:

> "I think we can all agree that the dream-images of your soldiers in the dormitory are in different spaces and that all of these spaces are different from the physical space in which the dormitory (and their bodies) are located. . . . On the other hand I suppose we *can* say that your dream-events and mine and everyone else's all have existence in one single time, which is also the time of the physical world."[22]

On the other hand, Dr. J. G. Pratt raised an opposite difficulty:

[21] J. R. Smythies, letter to Hornell Hart, May 20, 1952.

[22] H. H. Price, letter to Hornell Hart, May 7, 1952.

> "If we induce a dream in hypnotism, we can measure its duration; but do we take the time to be equal to the period during which the person dreams, or to the apparent time covered by the dreamed action?"[23]

The answer to both Dr. Price and Dr. Pratt is that every four-dimensional continuum has its *own* time-scale, which comes into equivalence with the time of any other four-dimensional continuum only when it intersects such another continuum. To illustrate, let us suppose that a fiction writer starts with a scene in which a man is proposing marriage to a girl. From this common space-time scene, the writer might develop an unlimited number of different possible plots. In one of the plots the girl accepts the man, they marry, have children and become a typical middle-class family. In the second plot the girl rejects the man, they separate, each of them finds another life partner, and they set up two separate families. In a third plot, the girl rejects the man with contemptuous ridicule, he loses his temper, murders her and commits suicide. Such a group of plots would illustrate what the science fictioneers call "branching time lines." Each of these plots could be handled in relation to its own independent time-scale (or scales), though all of the plots would have started from the same four-dimensional intersection, namely, the proposal scene.

Science-fiction plots illustrate still further the multiplicity of time-scales within the five-dimensional continuum. In one such story, a girl rejected the man who sought to marry her, whereupon he joined a group of scientists who were perfecting a space ship. This ship had developed a type of super-drive which approached the speed of light, and he took a journey in the ship, returning when the girl was an old woman, whereas he was still a young man, because of the alteration of the time dimension by the excessive speed. In another science-fiction story, the hero was placed in suspended animation, and awoke tens of thousands of years later. In another, a crew which started out toward a distant star, using an early model of space ship, found, on arrival, that a much faster ship had been invented after they left, and that other crews had arrived decades ahead of them. In other plots, some supposed means of speeding up the hero's time perception is found, so that the people in ordinary time appear to slow down so much as to become practically motionless, while the hero moves so fast (relative to ordinary people) that he becomes quite invisible. In one plot, the hero learned to reverse ordinary time, so that he could observe other people going backwards to any given point, and could thus control events to suit himself. This, of course, is merely a variation of the time-machine theme, which has had scores of different

[23] J. G. Pratt, memo to Hornell Hart, May 28, 1952.

treatments in science fiction. Comparative analysis of these science-fiction plots suggests the proposition that, in each such case, not one time dimension but two or more are involved. The story idea hinges, in each case, upon the difference between the time experience of the hero and of other characters in the story. Each character has his own unique time-line, on which his successive experiences are strung like beads. His personal identity is inseparably connected with his unique time-line, and with his acceptance of each experience on it as his own.

To summarize very briefly: every four-dimensional system has its own independent time. For the sensorimotor world, this is sidereal time. In a dream, time may be radically different. In the life beyond death, as reported in various purported communications, it is also different. But when two or more four-dimensional systems intersect fully, their time-dimensions and the time-lines of the participating personalities must coordinate with one another throughout that intersection.

E. Psychic Experience Versus the Rules of the Material World

Why Psychic Experience Transcends Time and Space: Under the theory presented in the present article, dreams, memories and fictional scenes all constitute four-dimensional structures existing in the psychic fifth dimension. This theory would explain quite simply why telepathy, clairvoyance and precognition so often operate independently of the limitations of space and time. To make this clear, let us set up an imaginary experiment (which the reader can easily carry out if he cares to do so).

Suppose that one goes into a dark, quiet and secluded place, sits in a comfortable chair, closes one's eyes, and calls up in imagination a dwelling in which he has recently spent a considerable period of time, or of which he has vivid and protracted memories. Suppose that one goes back to the earliest memories which he has of this dwelling, then recalls as clearly as possible a series of events which occurred there, imagining himself as moving through those scenes once more. Suppose that he then brings back to mind the latest contact which he has had with that home. Suppose finally that he imagines vividly a future party which he plans to hold in that house, or some alterations which he proposes to have made in it.

During this period of recollection the experimenter has called up a four-dimensional structure, extended in space and in remembered and projected time. Within that structure the experimenter's focus

of consciousness has moved about. But the experimenter has also been maintaining his own unique time-line. He can say to himself: "It was five minutes ago that I was imagining myself as entering the door of my home on that day when I first began to live there. It was a moment later that I recalled an event which originally occurred three years after I first moved into that house. . . . Just a little later in my experiment I was imagining a scene from the future of that same house."

Qualitative Differences Among the Dimensions: The above experiment brings out certain objective facts about the nature of experience in the psychic fifth dimension. We must distinguish clearly between the series of geometrical dimensions as an abstract set of logical tools, on the one hand, and on the other, the concrete realities of experience to which we attempt to fit these dimensions. In mathematics, dimensions X, Y, Z and W are interchangeable. But in practical life, we note vitally important qualitative differences between "vertical," "east-and-west," "north-and-south," and "past-to-future."

First, it must be noted that the three spatial dimensions are not ordinarily measured (in geography) on the rectangular rectilinear axes of solid geometry. Vertical locations are measured on converging lines, all of which (theoretically) pass through the center of the earth. Horizontal locations are measured along curved lines, on the surface of a somewhat flattened sphere. The vertical dimension has the qualitative peculiarity of being associated with gravitation. Travel east or west keeps one at a constant distance from the equator (with consequent climatic implications) whereas travel north or south involves moving toward or away from tropical or arctic regions.

Time has various fundamental differences from the spatial dimensions.[24] Outstandingly, in time (considered as a dimension of our solar system) we can move only forward, and that at an inexorably fixed speed (barring such extremely exceptional processes as travel approaching the speed of light.)

The above qualitative peculiarities of each of the first four dimensions should prepare us to expect special qualitative characteristics in the fifth dimension. In the psychic dimension, whether one examines the ordering of objects and events in dreams, in memory, or in constructive imagination, it is evident that one's focus of consciousness is able to jump about, at will or on impulse, in psychic space and time. In purposeful recollection, or in memory, one shifts deliberately and quite often instantly from point to point in psychic space-time. In

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[24] Laurence J. Lafleur, *op. cit.*, pp. 169-178; also letter to Hornell Hart, July 10, 1952.

random daydreams and ordinary night dreams such shifts also occur.[25] Thus, in the psychic dimension, experience is ordered, not by physical distance, nor by sidereal time, but by what is sometimes called "the association of ideas,"[26] or "emotional, ideational and habitual linkage." Likenesses and differences, logical relationships, past loves, fears, hates, anguish and joy, shared experiences, reciprocal needs — such are the psychic gravitational attractions and the psychic bridges which unite the objects and experiences of different four-dimensional structures within the five-dimensional psychic continuum.

A few pages back, it was observed that fiction and drama involve intersections between the four-dimensional lives of the characters. But note that such intersections subordinate the rules of material space-time to the rules of the psychic dimension. The dramatist leaps around from place to place and from one time-crisis to another in constructing his drama.

The Material World as a Special Case: In the preceding section it is suggested that apparitions are a type of phenomena which involve intersections between "physical" and "mental" four-dimensional structures. If such intersections do occur, it seems natural to regard "physical" space-time as a special type of four-dimensional structure within the psychic five-dimensional continuum. This special case of four-dimensional structure, which we call the physical universe, has certain peculiarities. Communication there takes place by means of the senses. One cannot move from one point to another, in space or in time, without traversing a continuous series of intermediate points. But mental four-dimensional structures are of a different character. Communication in and between such structures is by means of telepathy. An intersection between two mental four-dimensional structures would appear to involve a high degree of telepathic rapport, while an intersection between a mental and a physical four-dimensional structure (as in the veridical experiences of astrally projected consciousness) involves clairvoyance.

Mind Often Dominates over Matter in the Psychic Dimension: The above section offers a theoretical explanation of the transcendence

[25] Dorothy H. Pope, Managing Editor of the *Journal of Parapsychology*, points out that, even in the psychic continuum, one's freedom to move about in time and space has limits. Once one has made a jump (by ESP or by imagination, or in a dream) one tends to follow sequences of time and space which are similar to those of the sensorimotor world. She writes: "I've heard of apparitions who disregarded matter by walking through walls, but I don't believe I ever heard of one which disregarded time. You don't see an apparition shoot itself before it picks up the gun."

[26] The "psychic-fifth-dimension theory" appears to be directly in harmony with Whately Carington's "association theory of telepathy," as developed in his *Thought Transference* (pp. 98-161). The relations between the two theories will be explored in a subsequent article "Can the Five-Dimension Theory be Useful in Psychical Research?"

of space and time by telepathy and clairvoyance. But how about psychokinesis?

The present writer has frequently questioned groups of people about their dreams of flying. Theoretically, one might be expected to dream of flying in an airplane or a dirigible. More rarely, one might be expected to dream of flying with feathered wings, as angels are supposed to fly, or as mythological personages are related to have flown with magic bird costumes. But aviation dreams are rare (except by people whose daily lives involve frequent flying) — and angel-winged dream flights are almost non-existent, among persons to whom these inquiries have been addressed. About one-third to two-thirds, of the typical group, report having had flying dreams, but the plurality of such flights have been dreamed to have been achieved by mere will-power — aided, perhaps, by some paddling motions of the feet or hands.[27]

In one such dream, recorded by the present writer, I found myself pursued by some enemy. In my need to escape, I realized that I could pass through a solid stone wall if I merely determined strongly enough to do so. And I did escape by that method, in the dream.

Quite in line with such dreams and imaginations are certain characteristics which have been repeatedly reported in connection with apparitions, both of the dead and of the living. Apparitions typically do adjust themselves to their physical surroundings. They may enter through a door, sit in a chair, look at a picture or at a person — even touch a person's arm or face with their hands. But apparitions also frequently transcend their material surroundings. They pass through doors which are closed and locked. They rise into the air. They dissolve into nothing when one seeks to embrace them.

Levitation of living persons is one of the persistently reported types of psychic phenomena. The occurrence of "apports," the passage of matter through matter, and the materialization of spirit forms have also been reported repeatedly. Without passing judgment as to the authenticity of such phenomena, it is worth pointing out that they might be expected to occur occasionally if the physical world is merely

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[27] Prof. H. H. Price, in a letter to Hornell Hart, dated May 7, 1952, commented as follows on the above paragraph: "May I just add that my own experiences of dreams of flying (which I used to have fairly often at one time) entirely support what you say? Although I have flown quite a lot in real life, both as pilot and as passenger, and have almost a passion for aviation in all its forms, I have never found myself flying with wings in my flying dreams. It has usually been much like swimming—only that one was swimming in air instead of water—and sometimes it has just consisted in making oneself rise over a wall or the like in a standing position by sheer effort of will. The experience has always given me intense pleasure, and a certain pride, as of one who is learning to accomplish a rather difficult feat. But I don't think I have ever managed to 'fly' more than twenty yards or so."

a special case of four-dimensional structure in the five-dimensional psychic continuum.

The psychokinetic influencing of the fall of dice and other objects is, however, a well-authenticated type of psychic phenomenon. Cases of the psychic healing of structural lesions in human and animal bodies have also been reported in apparently authentic cases. Such occurrences are also in line with the fact that mind does often control "matter" in the *mental* structures of the psychic continuum. In the sensorimotor world also, the fact that a soldier's body can be put into action by so mental a process as the giving of an order by an officer — and, indeed, the fact that one can raise one's own arm by determining mentally to do so, are utterly mysterious on the basis of materialistic theories, whereas they become quite matter-of-course when one recognizes the sensorimotor world as merely a special case of four-dimensional structure within the five-dimensional psychic continuum.

Escape into the Fifth Dimension: A further development of the significance of the five-dimensional theory, as explaining some types of psychic phenomena, may be found along the following lines. Let us suppose (as has frequently been done) that a Mr. Square and a Mr. Triangle both live in a two-dimensional "Flat World" (with time as a third dimension). Neither Mr. Triangle nor Mr. Square is aware of any other dimensions except length, breadth and time. Let us suppose that Mr. Square imprisons Mr. Triangle in a circular prison. As long as the operations are confined to the three-dimensional flat world, and as long as the circle remains closed, it is impossible for Mr. Triangle to escape. But along comes a four-dimensional person who recognizes this three-dimensional Flat World as simply one of an infinite number of such worlds which might be fitted into his four-dimensional continuum. This person might take Mr. Triangle out of his circular prison without breaking the wall, leaving Mr. Square confronted with a miracle.

Similarly if we regarded our four-dimensional world as simply one of an infinite number of such structures which might be contained in the five-dimensional psychic world, we could well imagine that an entity who had free range of the psychic continuum might take out a prisoner from a completely closed and locked dungeon. This line of explanation would account for apports, for the sudden appearance and disappearance of apparitions, and for various other psychic phenomena. Argument along similar lines might possibly explain such conceivable phenomena as instant passage to some remote point (the "space-warp" of the science-fictioneers), the passage of matter through matter, the tying of a knot in a continuous rope without freeing the ends, and the like. The present theory would hold, however that the

fundamental explanation for the occurrence of psychic phenomena lies rather along the line of recognizing that the basic characteristics of the psychic continuum are different from those which obtain in the "material world." The use of an extra dimension may provide a *modus operandi* in some cases, but the basic fact is that, in the psychic continuum, the focus of consciousness normally transcends space, time and matter.

Conclusion: Materialistic prejudice attempts to impose the assumption that the laws of motion, of perception and of matter in the physical space-time world must be universal in their scope. But in the light of the five-dimensional theory, such assumptions appear to be narrowly parochial. Psychic phenomena might naturally be expected to conform rather to the basic nature of the psychic fifth dimension.

F. The "Five-Dimensional" Psychic Hypothesis: A Summary

On the basis of the foregoing discussion, the following propositions are submitted as providing a rational foundation on which to base psychical research with some reasonable hope of obtaining verifiable conclusions about survival of personality beyond bodily death, and about the fundamental nature of our own existence.

1. The most inescapable fact about existence is that something thinks "I" and that this "I" observes and operates from a focus of consciousness which finds its locus along a unique time line, occupying such foci in a succession of four-dimensional space-time structures.

2. The most persistent and consistent of these four-dimensional space-time structures is the one whose present moment the "I" experiences continuously (during ordinary waking consciousness) as the sensorimotor world. In this structure, (a) one can normally traverse time only from past to future; (b) one can normally get from one point to another only by traversing a continuous series of intermediate points; and (c) one can normally move matter outside one's own body only by activating a continuous chain of material movements from one's body to the object which is to be moved, or by altering a force-field which includes the object.

3. During dreams, memory, imagination and hallucination, one's focus of consciousness may observe and operate within an unlimited number of different space-time structures which exist within the psychic five-dimensional continuum. Within these structures (a) one can move back as well as forward in time; (b) one can move instantly from point to point in space and time, without traversing a continuous series of intermediate points; and (c) one can develop the capacity

to move and to shape matter (including one's own body) by direct action of one's will.

4. Four-dimensional structures intersect and merge by telepathy in shared dreams. Apparitions of the living involve merging intersections of four-dimensional dreamed or imagined structures with the sensorimotor world.

5. That the sensorimotor world is a special case among the unlimited number of space-time structures within the five-dimensional psychic continuum is suggested by the following facts: (a) that apparitions and other types of intersections between the sensorimotor and other space-time structures occur; (b) that psychic transcendence of time occurs in the form of precognition; (c) that psychic transcendence of space occurs in the forms of shared dreams, apparitions, telepathy, and clairvoyance; and that psychic transcendence of matter occurs in the forms of psychokinesis and ectoplasmic materializations.

6. That we share with one another the same sensorimotor world (in the sense that we are able to share experience with each other by coordinating our observations and operations with one another far beyond anything which could be explained by chance or by self-delusion) is an unprovable but extremely well-supported hypothesis.

7. That similar sharing of experience in four-dimensional mental structures continues beyond the death of the sensorimotor body is suggested by the close parallelisms between self-conscious apparitions of the living and apparitions of the dying and the dead.

G. Some Research Priorities which Emerge from this Five-Dimensional Theory[28]

The theory of the five-dimensional psychic continuum provides a method of analyzing and classifying human experience. The known facts — both of "normal" existence and of psychic phenomena — fall naturally into place within the five-dimensional framework. This theory, however, is by no means self-obvious. Preliminary discussion has already brought out a series of alternative theories which have been advanced by other students of psychic phenomena. The pros and cons of these alternatives will be discussed (in comparison with those of the five-dimensional theory) in two subsequent articles.

At the present point, however, it is important to note that the chief

[28] In a letter dated April 28, 1952, Professor Ducasse has criticized an earlier draft of this section as follows: "As regards the research program, its specific proposals seem to me very good, but, so far as I can see, they are not suggested specifically by the five-dimensional theory . . . . An experiment can be properly said to be *based on* a given theory only to the extent that the outcome of the experiment would tend to decide between the given theory and its possible rivals . . . ."

touchstone for testing such theories consists in exploring what implications they have with respect to research. Theories of this sort have two practical bearings on research programs. First, any such theory implies certain priorities in research. It suggests the probable importance of certain kinds of inquiry, and the likelihood of obtaining significant results by collecting certain types of data and performing certain types of experiments. Second, any such theory, when it has been utilized as a basis for research priorities, and has been explored along the lines which it suggests, should lead to the designing of crucial experiments, by means of which the truth or falsity of rival theories may be tested.

The psychic-fifth-dimension theory opens up a whole series of challenging lines of research, in which controlled experiments and statistically tested findings are clearly obtainable — provided that financial resources, competent personnel, and persistent courage can be brought to bear on the presently obvious problems, and on the further hypotheses which will certainly develop if present clues are vigorously pursued.

1. A Fresh Review of Spontaneous Cases: The collection and investigation of spontaneous cases of psychical phenomena have been among the outstanding contributions of the British, the American and other SPR's. The theory presented in the present article emerges out of the analysis of such cases. Sciences, in their early stages, usually progress by fitting theories to collections of spontaneous data, and then seeking new data and fresh methods of analysis in the light of the theories. The present theory points toward the importance of collecting further spontaneous cases, and analyzing them along the following lines:

(a) Shared, or reciprocal, dreams need to be collected — i.e., dreams in which two or more people interact with each other, and which are remembered independently by two or more of the participants, and dreams occurring at approximately the same time, reported independently by two or more dreamers, when the dreams are more similar to each other than can reasonably be explained by chance or by shared waking experiences. Points to be particularly noted about such dreams include the following: (1) the extent and degree of similarity and of differences; (2) the amount and types of communication which occurred in the dream between the reporting dreamers; and (3) possible emotional factors which might have generated the dream.

(b) Clear dreams need to be collected (i.e., dreams in which the dreamer becomes aware of the fact that he is dreaming, but still continues the dream.) Points to be particularly noted about such dreams include the following: (1) frequencies with which such dreams recur to the same individuals; (2) conditions which

appear to be favorable to having such dreams; (3) techniques employed (if any) to induce such dreams; (4) extent to which the dreamer is able to control the content and development of such dreams; (5) types of personalities encountered in such dreams, and any indications which point, or seem to point, toward such personalities being independent consciousnesses or being mere figments of the dreamer's imagination; (6) appearance in such dreams of representations of persons known to be dead; and (7) connection of such dreams with dreams of flying and of falling.

(c) Astral excursions need to be collected (i.e., dreams or waking visions in which the dreamer or seer seems to be visiting places outside the normal sensory range of his physical body). Points to be particularly noted include the extent to which such experiences involve such items as (1) seeing one's own physical body from the outside; (2) perceiving physical objects, but being unable to move them; (3) being able to pass through closed doors or solid walls; (4) being levitated; (5) perceiving other people, who share the power to levitate and to pass through solid objects, and with whom one can communicate; (6) encountering persons known to be dead; (7) being perceived as an apparition or vision by persons seen while on such excursions; (8) acquiring, while on such excursions, information about physical objects, people or events, which one could not have acquired otherwise; (9) observing a "silver cord" connecting one's astral body and one's physical body; and (10) experiencing a sense of falling (with or without a feeling of shock) on returning to one's physical body. In connection with such points, it may be important to ascertain the extent to which the person reporting astral excursions has become familiar with the literature on the subject, or with the reported experiences of others who are familiar with the literature.

(d) Apparitions of the living need to be collected (i.e., waking visions or other sensory or pseudo-sensory perceptions of persons who are alive at the time, but whose physical bodies are not at the sensorimotor locations where they are perceived). Points to be specially noted are: (1) To what extent are such apparitions perceptible to other human beings? To what extent do they seem to be perceptible to dogs, cats, horses or other animals (judging from the behavior of these)? (2) Do such apparitions appear to be normally dressed, and natural in color? (3) To what extent do such apparitions display normal variations in perspective as they move about, or as they are seen by different percipients looking from different angles? (4) In what ways do such apparitions adjust normally to the physical environment (as by entering through open doors, mounting or descending stairways, sitting in chairs, seeming to perceive physical objects, etc.)? (5) In what ways do they transcend ordinary physical behavior (as by

appearing or disappearing suddenly, passing through solid matter, being transparent, etc.)? (6) In what ways do they give evidence of definite purpose? (7) Do they speak or otherwise communicate, and if so, what is the extent of the communication? (8) To what extent do such apparitions involve emotional linkages between the percipient and the appearer? (9) Do such appearances coincide and correspond with dreams or with other conscious experiences of the appearers, in which they seemed to be observing and operating from the positions in which their apparitions were perceived? (10) Is a given apparition of this kind perceived by more than one person at the same time?[29]

(e) Apparitions of the dead need to be collected (i.e., visions, or other sensory or pseudo-sensory perceptions of persons whose physical bodies are known to be dead at the time). Points to be noted include: In what ways are apparitions of the dead similar to, and in what ways different from, the most frequent types of apparitions of the living, with respect to each of the points enumerated above?

2. *Systematic Recording of Dreams by Groups of People.* This line of research would be designed to serve the following purposes:

(a) To determine the actual frequencies of shared dreams between various types of pairs of people. At present our knowledge on this point is extremely meager. Only a very small fraction of dreams are consciously remembered in waking life. The probability of an actual shared dream being publicly reported as such is the probability of that dream being remembered by a given participant, multiplied by the probability of the same dream being remembered by another participant, multiplied by the probability of one of them telling the other about it, multiplied by the probability of such a verbal discussion of the sharedness of the dream being reduced to a published report. Since each of these probabilities is small, the joint probability is exceedingly minute. Hence it seems safe to assume that such dreams are much more frequent than is generally supposed. If dreams are shared fairly often, the discovery of that fact will open up major lines of research into the nature of the psychic dimension.

(b) To determine the frequency of clear dreams, the types of people who experience them, and the conditions under which they tend to occur. A clear dream may be defined as one in which the dreamer is aware that he is dreaming and yet continues to dream. Various questions about clear dreams need to be explored. First, to what extent, and by what techniques, is it possible deliberately to increase the frequency and the duration of such dreams? Second, how fully is it possible for a dreamer to be in possession of his normal waking faculties in such a dream — such

[29] The paragraph on apparitions of the living incorporates several improvements suggested by Professor H. H. Price.

as remembering purposes which were formulated in his waking life, dreaming coherently and consistently, being able to reason clearly and to experiment verifiably, formulating purposes and conclusions in the dream which can be carried back into waking life, and the like? Third, if two people both developed fairly full control of their powers to dream clearly, to what extent could they call up dream images of one another, and to what extent could such reciprocal images (if achieved) be made vehicles for verifiable telepathic communication? Fourth, if clear dreamers should find it possible to achieve shared dreams of one another, to what extent could they call up clear dream images of deceased persons, and to what extent could such dream images become vehicles for communication of valid evidences of survival?

(c) To determine the frequency of precognitive dreams, and more about their character. Precognitive dreams have already been made the subject of a fairly systematic, but inconclusive, inductive study, in which Oxford students participated. Dunne's hypothesis suggests a high degree of frequency for such dreams. If this proves to be true even to a considerably less degree than Dunne anticipated, this fact is likely to call for major and fundamental reconstructions in many of our basic concepts of spiritual reality and of survival. The projected study of dreams should be set up in such a way as to check on the precognitive factor in conjunction with the other basic questions.

(d) To become more familiar with the difficulties involved in trying to remember dreams and to record them accurately and fully.

If the theory of the psychic fifth dimension be accepted, even tentatively, it becomes evident that dreams provide one of the most frequent, most vivid and most spontaneous forms of extrasensory four-dimensional structure. The systematic exploration of dream phenomena, in the light of the five-dimension hypothesis, should throw a good deal of light on possible further lines of research into the psychic continuum.

3. Experimental Induction of Clear and Reciprocal Dreams and of Astral Excursions: The induction of dreams by hypnosis is a well known phenomenon. Experiments should now be tried to determine to what extent *clear* dreams can be produced by hypnosis. Persistent attempts should also be made to develop such dreams through autohypnosis. If and when clear dreams can be obtained fairly dependably, the next step should be to suggest to paired individuals, independently, that they are to dream clear dreams about each other, with more or less detailed suggestions as to surroundings and events to be experienced and topics to be discussed in the dream. An almost unlimited variety of conditions would need to be explored in order to find out what procedures are most likely to produce clear shared dreams.

4. Experimental Encounters with "the Dead" in Dreams: If and when it becomes possible to produce clear shared dreams deliberately, with reasonable frequency, the next stage would be to induce clear dreams of dead persons, using a series of different dreamers, and taking measures to insure absence of sensory communication between them. If and when that type of phenomena can be produced at will, the problem of developing reliable tests of the independent identity of dead persons dreamed about can be tackled.

The above program is, of course, in a quite preliminary stage. It undoubtedly involves great difficulties and quite likely considerable dangers. It is outlined chiefly with a view to indicating possible lines along which the five-dimensional-psychic-continuum theory might reasonably be expected to produce fruitful results in relation to the problem of human personality and its survival of bodily death.

ESP Success and Trial Position[1]

J. G. PRATT

For this study I have taken the ESP data of another experimenter, Dr. S. G. Soal of London University. He sent these records to the Parapsychology Laboratory in the spring of 1951 for the investigation of psychological effects not revealed by the total scores of the tests. Later he himself came as a Fulbright Scholar for a period of joint research upon these records. The findings I wish to present at this time were made before Dr. Soal's visit.

Dr. Soal obtained the data in a series of extremely well controlled ESP tests done during the period, 1945-1950. The subject in these experiments, Mrs. Stewart, attempted to identify animal cards or "targets" under conditions of independent recording, safeguards against sensory cues, careful observation and checking, and other precautions that go beyond the requirements usually met by psychological research. Simply to describe these conditions fully would take all of my time, and I must refer you for the details to reports that have already been published (1, 2).

Here is a record sheet from this series with as much of the data as are essential for understanding the present report (Fig. 1). This sheet provided spaces for recording the results of two columns of 25 trials each.

Before each session the experimenter prepared the sheets he would need by filling out the two columns of digits 1 to 5 that determined the target order. The experimenter and a sender sat facing each other, separated by a screen. For each set of 50 trials the sender shuffled a set of five animal target cards and arranged them where she alone could see them in five positions numbered 1 to 5. The subject sat out of sight in another room with a blank record sheet for writing her calls. With her was an observer.

When the arrangements were complete, the experimenter held up a card with the first digit on the list so the sender could see it. The sender silently touched the back of the animal card in that position to indicate the target for that trial. The experimenter, who did not know the target, gave a ready signal, and the subject promptly wrote what she thought was the target in the first call space. (For convenience the calls and the target digits are shown in Fig. 1 as if they

[1] This is a research report which was presented on September 5, 1952, at the annual meeting of the American Psychological Association in Washington, D. C. The research was conducted with the support of a grant from the Rockefeller Foundation.

RECORD SHEET

[Simplified for purposes of illustration]

Subject: Mrs. Gloria Stewart Date: Nov. 19, 1945

(Spaces for recording Experimenter, Sender, Observers, Rate of Calling, Special Experimental Conditions, etc.)

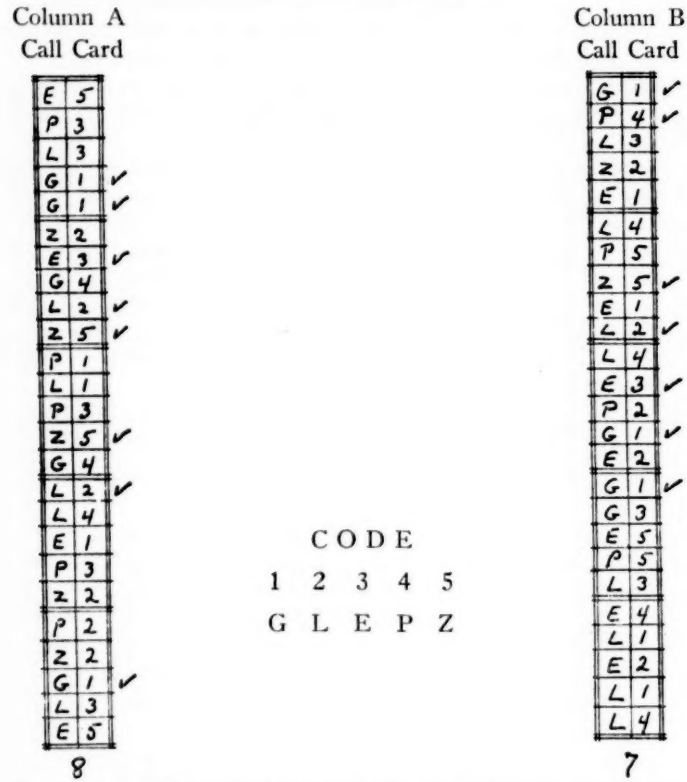

FIG. 1. A simplified record sheet showing the arrangement of the two columns on the page. The subject's calls were recorded originally on a separate page. To check the hits, the target digits must be translated into the animal letters by means of the code.

occurred on the same sheet.) This process was repeated without interruption through the 25 trials of Column A. Then there was a pause of about 10 seconds, and the second half of the page was done in the same way. The 50 trials took about 2 minutes.

The experimenter then came around the screen and copied down the order of the target cards. The results were checked at the end

of the session, which usually consisted of eight such sheets. The subject did not watch the check-up and she rarely saw any of the record sheets other than the ones on which she wrote her calls.

The results were statistically highly significant in terms of the total number of hits. The over-all scoring rate was 25.3%, compared with a mean chance expectation of 20%. There were 37,500 trials with the standard procedure I have described, and these gave 9,483 hits, or 1,983 more than chance expectation. The probability value of this result is approximately 10^{-137}. By contrast, consider the results obtained when we took a control series of scores by cross checking the results on each page: the calls of Column A against the targets of Column B and the calls of B against the targets of A. In this control series, there were only 11 more hits than the expected number, an obviously insignificant result.

But we have found that the total scores by no means reveal all that we are able to learn from the data about the subject's performance. The success rate in several ways was affected to a highly significant degree by trial-to-trial factors in the tests. These special effects have been measured in ways that are statistically independent of the gross scores. They therefore provide additional evidence of psychological effects in the data and at the same time point to facts that may help us to understand the response mechanisms involved. We will consider one of these trial-to-trial effects.

I found that the actual *position* of the trial on the record page had an effect upon whether the subject's call hit or missed the target. This discovery was made first in a preliminary sample of 50 pages of data taken from near the middle of the series. I then took 600 other pages from the series as a test group to see whether the same position effects were present in the data as a whole.

The most significant positional trend in scoring in the preliminary sample was a general decline in success within Column A as shown by a five-point curve for the column, each point representing the average level of scoring for a five-trial segment. The graph shown in Fig. 2 shows the same general decline in hit frequency within the pooled 600 A-columns of the test group.

To make a statistical test of this drop in scoring, each of the 600 columns involved was given two scores: one equal to the number of hits made in the first 10 trials and another for the hits made in the last 10 trials. (The precedent for doing this was set in working with the preliminary group.) The difference between the means of these two groups, of 600 scores each, was evaluated by the use of Student's t. The value of t was found to be 9.27 (1,198 degrees of freedom), with P being less than 10^{-18}. Thus it is clear that the position effects are statistically significant on the basis of the Column A decline alone.

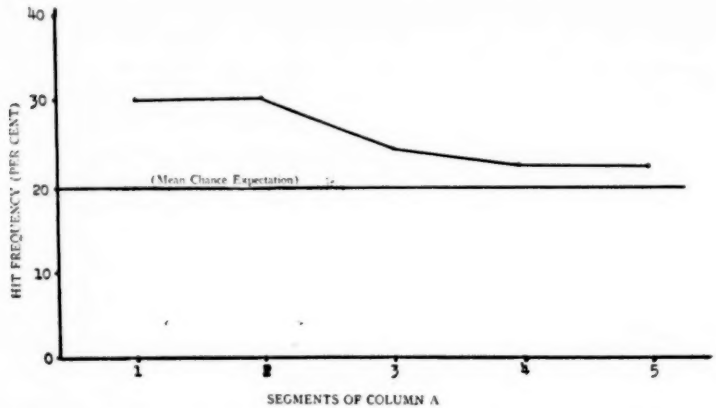

FIG. 2. Decline in ESP score level in Column A based upon the pooled left-hand columns of the 600-page test group.

Another control check, one bearing specifically upon this decline, was obtained by comparing the calls of Column A on one page with the targets of Column A for the next page. The results for 650 columns were within the limits of random fluctuation as regards both the total score and the difference between the first 10 and the last 10 trials.[2]

Anyone who has followed the experimental work in parapsychology knows that declines have been reported repeatedly. In fact, this effect was observed by Richet, Sidgwick, Jephson and Estabrooks before experimental work in this field was started at Duke University in 1930, and it has been a common feature of ESP results obtained during the last two decades. Why do I bother, therefore, to report still another instance of score decline?

I was influenced, I admit, by a recent survey of psychological opinion which leads me to infer that there may be one or two members of the audience who are still unconvinced regarding the evidence for ESP. The decline effect shows that there is something unmistakably *psychological* about these results, a gradient of performance that is similar to those we find in such familiar areas of research as learning of nonsense syllables, studies of recall, and even my old field, the

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[2] This control study demonstrates that only chance results are obtained when the subject's calls on one record page are checked against the target digits of a later page. These chance results show that the highly significant scores and position effects obtained when the calls are compared with the real targets cannot reasonably be attributed to any kind of statistical artifact arising from the failure of the digit lists to meet all the standards of randomness, as previously reported (2).

behavior of rats in a discrimination situation. Some psychologists have suggested that they cannot accept ESP until they have a logical framework for it. The scoring decline reveals a lawfulness of response in the ESP test situation which is certainly no less consistent than that found in many aspects of behavior with which psychologists have long been concerned. Such findings seem to me to offer a challenge to, if not to place an obligation upon, psychologists to study the evidence of parapsychology — the *better* evidence — rather than to look for weaknesses in series which the investigators themselves have never considered crucial, and certainly not to launch upon critical attacks without bothering to study the literature.

I haven't time to describe the other aspects of position effects in these data, many of them effects peculiar to this one subject. The details have been given in a report that is awaiting publication in the *Journal of Parapsychology.*

Some of you may be wondering why Dr. Soal did not discover these position effects himself. In fact, he did analyze the data for this purpose, but he made the assumption that the pattern of variation in the A and B columns should be the same, and he therefore pooled the records from the two halves of the page. Column B does have significant position effects, but they are opposite to those in Column A to such a degree that the scoring trends were largely obscured when the two parts of the page were combined.

The full report will also present significant variations within the five-trial segments. It was not all downhill for the subject in Column A. An increase in the first five trials was observed in the pilot study, and this tendency was confirmed in the test group ($P = 10^{-6}$). Also, there is a peculiar tendency for the scoring to alternate between a high level and a low one for even and odd trials, respectively, in the second half of the page ($P = 10^{-8}$). (See Column B of Fig. 1.) The study of the factors producing such consistent performance patterns should help us to understand and control the psychological processes involved.

References

1. Soal, S. G., "The Experimental Situation in Psychical Research," *Ninth Myers Memorial Lecture,* S.P.R., 1947.
2. —— and Pratt, J. G., "ESP Performance and Target Sequence," *Journal of Parapsychology,* Vol. 15, 1951, pp. 192-215.

Reviews

CONVERSATION AND COMMUNICATION: A Psychological Inquiry into Language and Human Relations, By Joost A. M. Meerloo. Pp. X + 245. International Universities Press, New York, 1952. $4.00.

SPECIALIZED TECHNIQUES IN PSYCHOTHERAPY. Edited by Gustav Bychowski, M.D. and J. Louise Despert, M.D. Pp. XII + 371. Basic Books, New York, 1952. $5.00.

Dr. J. A. M. Meerloo's book *Conversation and Communication*, and *Specialized Techniques in Psychotherapy*, edited by Drs. G. Bychowski and J. L. Despert, have one thing in common: they include specific references to problems of parapsychology. This certainly marks a new departure in psychiatric literature. Dr. Meerloo approaches his topic from the psychoanalytic point of view. He deals with communication as a means of reaching out to our fellow men, of establishing contact with them through spoken or written words, various expressive acts such as gestures, facial expressions and psychosomatic symptoms. Paramount among the motivations for communication and conversation is the need for companionship, the need to make contact, to inform, to state facts. But the desire to give vent to emotions, to take a position opposite the world, to use language as a means of magic control, of self-assertion and aggression, is equally important. Words can thus be used to induce erotic feelings, as an exhibitionistic ingredient in courtship, as a destructive weapon of propaganda or as camouflage to conceal offensive thoughts and a device to confuse an opponent. They can, eventually, through a slip of the tongue, give away unconscious mental content. But Meerloo emphasizes that there are means of communication between person and person, and, for that matter, between animals of various species, which do not fit in with our familiar three-dimensional system of symbols. This type of communication must be assumed to take place between analyst and patient in later stages of the treatment; between mother and child; between the hypnotist and his subject; and between lovers in certain climactic stages of their relationship. Meerloo holds with Freud that communication of this type is an archaic function and compares the well-known resistance to such uncontrollable heteropsychic influences to our resistance to unconscious mental content in general.

The book, written in a delightful, easy vein, is replete with ingenious psychological observations and is in itself a rare example of an art whose decline the author rightly deplores: the art of conversation.

Yet this only enhances its merits as a valuable contribution to the subject which he sets out to explore.

Specialized Techniques in Psychotherapy is a symposium. It comprises such diverse contributions as articles on hypnoanalysis, on the treatment of schizophrenic children, on psychotherapy with the crippled and disabled, on the psychoanalytic management of marital problems, group therapy and the Rorschach test. Of special interest is Dr. J. Eisenbud's chapter: "The Use of the Telepathy Hypothesis in Psychotherapy." In a brief historical introduction he seeks to put psi events in the proper perspective. They have to be regarded as manifestations of behavior that subserve the same adaptational laws as all behavior and must no longer be considered as "disembodied and almost depersonalized outside happenings . . ." (p. 44).

Following in the footsteps of Freud and Stekel, and using familiar methods of psychoanalytic interpretation, Eisenbud illustrates his point by a dream reported to him by a patient. In the light of orthodox dream analysis it was easy to relate its latent content to the dreamer's unresolved psychic conflicts. But Eisenbud shows that such a procedure still leaves a gap in the full dynamic understanding of the dream and its highly involved symbolism. This gap could, however, be readily filled when a specific missing link (which the dreamer could only have perceived in a telepathic way) was incorporated in the context of the dream. In the light of such an interpretation it appeared that the telepathic perception served a specific dynamic purpose: it helped the dreamer to deal, on an unconscious level, as it were, in advance with a problem which was about to break upon her consciousness at the time the dream occurred. Eisenbud illustrates the usefulness of such an approach in several other incidents observed in his analytic practice. In one case the telepathic interpretation helped toward a better dynamic understanding of what otherwise might be attributed to the scientifically meaningless operation of mere chance coincidences. In another case, again, he seeks to establish a telepathic correlation between a dramatic incident in his patient's life and a simultaneous striking change in her neurotic symptomatology. Observations like these tend to justify the introduction of the telepathy hypothesis as a legitimate tool of psychiatric theory and practice and hold the promise of deeper insight into existing clinical problems.

The inclusion of Eisenbud's article in a symposium devoted to current and established techniques of psychotherapy testifies to the vision and pioneering spirit of its editors. If the lack of editorial comment (or of any cross references by other contributors to Eisenbud's thesis) leaves this reviewer with a slight sense of frustration, this certainly is not the fault of either the editors of the symposium or of the authors themselves. It merely reflects an attitude still pre-

vailing in the field of clinical psychiatry at large — notwithstanding the notable exceptions represented by the books reviewed here.

JAN EHRENWALD, M.D.

HISTORY OF AMERICAN PSYCHOLOGY. Illustrated with portraits, drawings and charts. By A. A. Roback. Pp. XIV + 426. Library Publishers, New York, 1952. $6.00.

This valuable book, heralded by its publishers as the first history of American psychology, surveys three centuries of psychology in this country from its beginnings in Colonial times through its many stages of development to the present. Of particular interest to readers of this JOURNAL is the author's recognition that psychical research is not a subject to be lightly dismissed, or ignored altogether, as unfortunately appears still to be the case with many psychologists. This the author makes clear in the following passage:

> "There can hardly be a greater contrast than between physiological psychology and psychical research, yet they are both, more or less peripherally, related to psychology, the one as a basis for it; the other as a higher dimension or level. Whether or not we accept its convictions or its methods, it does not behoove us as scientists to dismiss that type of research with a snort" (p. 389).

In the section on psychical research, Dr. Roback summarizes the little-known investigations in the psychical field of Joseph R. Buchanan, an American physician, who as early as 1842 claimed "to have made the discovery of the peculiar impressibility of the human brain, which enables it to receive cues without the mediation of the senses." While, as the author points out, modern psychologists might not agree with Dr. Buchanan's interpretation of his results, in view of the vastly increased knowledge in the field since his time, it is of interest to note that one series of "interesting and even exciting" experiments was performed with about 80 students and several professors of the Eclectic Medical Institute of Cincinnati, "where it turned out that nearly one-half the students and five of the professors were affected in a definite manner by holding in their hands an envelope containing some drug entirely concealed from view" (p. 390).

Buchanan, Dr. Roback tells us, then experimented with living persons instead of objects and discovered that by placing the hand on any part of the body of a person in a state of even incipient disease, the observer felt a distinct reaction. He called his method "psychometry," and "was prepared to champion the theory that the electrical properties of the brain (a most original thought about a century ago, when we consider the recency of the electro-encephalo-

graphic technique) come in contact with the 'mysterious influences' of the object or writing" (p. 390).

Coming further down the line, Dr. Roback refers to a substantial number of English and American psychical researchers. Among the latter, in the opinion of this writer, some receive considerably less appreciation than they deserve. Surely, the work of James H. Hyslop, founder of this Society, and Walter Franklin Prince, research officer of both the American and Boston societies for psychical research, commands respectful attention. On the other hand, the contributions of William James, and of William McDougall, who presided over this Society in 1921-1923, are favorably compared to the achievements of the "moving spirits" in the S.P.R.

Dr. Roback concludes his short survey of psychical research in America by indicating the attitudes, pro and con, of psychologists who have given their time and energy to its investigation. Gardner Murphy, he says, has, in the matter of telepathy, "steadfastly maintained a sympathetic attitude on the basis of experimental data" and J. B. Rhine, who established the parapsychology laboratory at Duke University, has created so much interest in the reported phenomena as to receive sufficient subsidies for his publications. "In fact, it may be said, that Duke University is the only higher institution of learning which harbors a separate department of this sort."

L. W. A.

Response to Appeal for Dreams

Dr. Jule Eisenbud, of the Executive Committee of the Medical Section of the Society, wishes to express deep thanks to the members of the A.S.P.R. for their splendid cooperation in responding to his recent appeal for samples of dreams. The study for which these samples are to be used has a direct bearing on psychical research, but the results will not be known for some time.

Correspondence

To the Editor of the JOURNAL:

In his recent paper "The Natural, the Mystical, and the Paranormal" (this JOURNAL, October 1952, pp. 125-142), Professor Murphy has offered the thesis that the basic need to establish contact with someone other than ourselves may be a significant determinant in various types of love experiences, mystical experiences and paranormal experiences. He points to a certain kinship between all three types and, after discussing the mystical and the paranormal, suggests that "the experiences to which I have invited your attention are experiences of reaching out to *other* selves; they are experiences like the experiences of love." Throughout the paper the "reaching out" and the need to communicate so characteristic of the love experience is presented as the prototype of the mystical and the paranormal experience. Only toward the close of his paper does Professor Murphy add: "I would not of course venture to say that *every* mystical experience, or that *every* paranormal experience, is determined solely by the need to communicate with others. These experiences may have other dimensions than those described here." As to what these other dimensions might be, however, we are given no hint, almost as if they hardly needed to be taken into account.

One of the dimensions that seems not to have been considered in Professor Murphy's paper is that which we might broadly designate as hate. While it may be true that hate is often enough the result of some interference with, or frustration of, a person's love needs, it is nevertheless also true that hate, once engendered, becomes a powerful motivating force in its own right, and must be included in a truly representative catalogue of those needs which may lead people to establish contact with others. However, this "dimension," which in its modes and manifestations might well merit a description as eloquent as that which Professor Murphy accords certain forms of love, does not always require *communication with* others, unless we are to define this in a much broader sense than we ordinarily do. In the case of hate, contact is sometimes required merely in order to destroy, to hurt, to hinder or to render in some way less threatening.

Offhand it is difficult to see why paranormal functioning should serve only the more socially acceptable of man's needs rather than *all* of his needs. No such distinction seems to establish itself in the case of other human functions, be they sensory, motor, endocrine or whatnot. An arm which can tenderly encircle a waist can also, subserving another need, stab or strangle; the vocal apparatus which sings the most exquisite love poetry may under other conditions mutter maledictions. Most functions are not specific but show marked versa-

tility and adaptability in the expression of various and changing needs. However, those of man's needs which we might subsume under hate —needs frequently as blocked from adequate direct expression as his love needs—seem not to have figured very largely in the investigations and theorizing of parapsychologists. If it be urged, as indeed it is by Professor Murphy, in the spirit of Lotze, that "the objective efforts of science towards ever fuller understanding and inspection of the picture of nature must be rigorously pursued to the uttermost limit, with never an experience held out from the accounting, immune to the searcher's peering eyes," must we not forthrightly and candidly search out those of man's natural experiences which happen to be less agreeable to his picture of himself than those which we are happy to set down to the power of love? Might we not also say here that "just as the world of natural love and communication has nothing to fear by being studied, and just as we believe that the use of critical observation and analysis may bring into a unity that which at first seemed fractionated and irreconcilable," so in the realm of those phenomena that can be related to hate and aggression "rigorous and systematic inquiry" has nothing to fear?

The fact is that neither love nor hate—those two eternally wedded and eternally warring forces in the affairs of mankind—has been subjected to particularly free inquiry, neither free nor rigorous nor systematic. How this happens to be is itself worthy of rigorous investigation, investigation which may conceivably shed some light on mankind's oppressively and obstructively ambivalent attitude toward study of the paranormal. At all events, a considerable part of civilization and its institutions (including certain aspects of science and scientific method) seems to be bound up with a guilty need on man's part to exalt the role of his love impulses in the large scheme of things at the expense of his frequently unrecognized and more often disavowed hate impulses, while numerous conceptual devices have been developed to enable man to dissociate himself from the power and effects of the "bad" in him. What is of particular concern to us here, though, is that in the literature of psychic research and parapsychology there appears to be more than a barely perceptible trend—in books, articles and editorials—to relate paranormal behavior almost exclusively to those impulses and dispositions in man that we hold to be good and laudatory.

That the evidence points this way is exceedingly doubtful. In any case this is not the entire story. True, we do not today see much of the evil eye or hexing, but is it not a hazardous presumption to imagine that what for so long figured in the fantasies and folklore of peoples all over the globe has no counterpart in the lives of the insecure, anxiety-ridden and all too frequently hate-inspired people of today? Perhaps what is needed before we can come up with a more balanced

picture of man's paranormal behavior is a more adequate methodology for the collection of certain types of data and a more tolerant theoretical framework into which to put these data than those currently in use by the majority of investigators in parapsychology. One such method, the psychoanalytic, though far from adequate in many respects, and by itself hardly in the highest tradition of experimental science, nevertheless is beginning to uncover data that do in fact point to the individual's use of paranormal functions for a variety of needs which far transcend his need solely to reach out toward contact with those who might satisfy his love requirements. Needs which might well be classified under hate seem to figure largely in this panel, as well, incidentally, as needs that appear to be largely autistic and have little or nothing to do with anything that might even broadly be defined as effectual contact or communication with others in a genuine interpersonal, social sense.

The foregoing ought by no means to be construed as a wholesale rejection of Professor Murphy's excellently presented thesis. The plea is merely for a wider focus on paranormal behavior than one which results in a picture of things far more one-sided and far more gratifying to man's self-esteem than we get in other areas where psychobiosocial behavior has been studied. (This may conceivably apply as well to the mystical experience, which is not to impugn either the reality or the effects of such experience.) Parapsychology's tendency to neglect the so-called seamy side of man's vital strivings may lead, as I fear it has, to theoretical *cul-de-sacs* which may long impede its efforts to integrate its hard-won data with the data and theories of other scientific disciplines. One such *cul-de-sac*, in my opinion, is current thinking about what is termed precognition. Here the neglect of the fact that man is, among other things, oftentimes a violently hating animal who prefers to invent fantastic subterfuges rather than face up to the destructive aspects of his subtle role in affairs, has more or less blocked us from the serious consideration of hypotheses that might go far toward obviating the necessity for postulates about time that seem somewhat less than comprehensible to many students of the question. But this is a matter that clearly cannot be dealt with in a page or two.

JULE EISENBUD, M.D.

HISTORY OF THE SOCIETY

The First American Society for Psychical Research was formed in 1885, in consequence of a visit by Sir W. F. Barrett to this country, and Prof. Simon Newcomb became its President. In 1887 the Society invited a man of signal ability, Richard Hodgson, A.M., LL.D., sometime Lecturer in the University of Cambridge, to become its Executive Secretary, and he accepted.

This organization later became a branch of the English Society under the very able guidance of Dr. Hodgson until his death in 1905. The American Society for Psychical Research was then re-established with James H. Hyslop, Ph.D., formerly Professor of Logic and Ethics in Columbia University, as its Secretary and Director.

THE ENDOWMENT

The American Society for Psychical Research, Inc., was originally incorporated under the Laws of New York in 1904 under the name of American Institute for Scientific Research, for the purpose of carrying on and endowing investigation in the fields of psychical research and psychotherapeutics. It is supported by contributions from its members and a small endowment fund. The income of the Society pays only for the publications and office expenses, but does not enable the Society to carry on its scientific investigations. A much greater fund is required before this work can be carried forward with the initiative and energy which its importance deserves.

The endowment funds are dedicated strictly to the uses set forth in the deed of gift and are under control of the Board of Trustees, the character and qualifications of whom are safeguarded, as with other scientific institutions.

Moneys and property dedicated by will or gift to the purposes of the American Society for Psychical Research, Inc., whether to the uses of psychical research or psychotherapeutics, are earnestly solicited. The form which such dedication should take when made by will is indicated in the following:

"I give, devise and bequeath to the American Society for Psychical Research, Inc., a corporation organized under the laws of the State of New York, the sum of ..... dollars (or if the bequest is real estate, or other specific items of property, these should be sufficiently described for identification), in trust for the corporate purposes of said Society."